

CLAIMS

1. A surface-mountable interface module for attachment to a composite structure to interface with an optical transmission means embedded in the composite structure, the module containing interface optics to manipulate light that, in use, passes between the module and the optical transmission means, and interrogation means for interrogating a sensor system associated with the optical transmission means.
2. The module of Claim 1, wherein the interrogation means comprises sensor means for sensing parameters of light entering the module from the optical transmission means embedded in the composite structure.
3. The module of Claim 2, including data output means for outputting sensor data from the sensor means to a remote location for display and/or processing.
4. The module of any preceding Claim and being suitable for attachment to a central surface portion of the composite structure, the module having a mating surface for coupling to the composite structure to define an intersection between the module and the central surface portion, and wherein the interface optics manipulate light that, in use, passes between the module and the optical transmission means through the intersection.
5. The module of Claim 4, including beam-turning means for turning light from or into a direction substantially parallel to the central surface portion of the composite structure, respectively before or after the passage of said light through the intersection.
6. The module of Claim 4 or 5, wherein the mating surface is penetrated by an optical port communicating with the interface optics within the module.

7. The module of any preceding Claim, and being arranged to present a streamlined exposed surface when the module is attached to the composite structure.

8. The module of any preceding Claim, wherein the interface optics comprise an optical interface portion adapted to interface with a co-operating optical interface portion in the composite structure.

9. The module of any preceding Claim, comprising locating formations adapted to co-operate with complementary locating formations in or on the composite structure.

10. The module of any preceding Claim, comprising integral sensor components.

11. A composite structure comprising a support structure carrying an embedded optical transmission means, and having an interface module as defined in any preceding Claim attached thereto in optical communication with the embedded optical transmission means.

12. A method of making the composite structure of Claim 11, the method comprising forming a passageway in the support structure to create an optical port between the embedded optical transmission means and the exterior of the composite structure, and attaching an interface module as defined in any of Claims 1 to 10 to the composite structure over the optical port.